BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2023-388-E

In the Matter of:	)	
	)	**DIRECT TESTIMONY OF**
Application of Duke Energy Carolinas, LLC	)	**CHRIS R. BAUER**
For Authority to Adjust and Increase its Electric	)	**FOR DUKE ENERGY**
Rates and Charges	)	**CAROLINAS, LLC**
	)	

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION WITH DUKE ENERGY CORPORATION.

A. My name is Chris R. Bauer and my business address is 525 South Tryon Street, Charlotte, North Carolina 28202. I am employed by Duke Energy Business Services LLC ("DEBS") as Director, Corporate Finance and Assistant Treasurer. DEBS provides various administrative and other services to Duke Energy Carolinas, LLC, ("DEC," or the "Company") and other affiliated companies of Duke Energy Corporation ("Duke Energy").

Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL QUALIFICATIONS.

A. I received a Bachelor of Arts degree from Flagler College in 2003 and a Master of Business Administration degree from the University of North Florida in 2004. I am a licensed Certified Public Accountant in the state of Florida.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.

A. From 2004 to 2010, I worked in Deloitte's Audit and Enterprise Risk Services unit, providing financial statement and internal control services across various industries. In 2010, I joined Duke Energy as a Lead Audit Consultant in the Internal Audit Department. In 2015, I moved to Duke Energy's Investor Relations group where I served as a Manager responsible for communicating the company's strategic, operating and financing plan to debt and equity investors and external stakeholders. In 2017, I moved to the Treasury department and served as both a Treasury Director and the Director of Credit & Capital Markets before assuming my current role in early 2021.

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS DIRECTOR, CORPORATE FINANCE AND ASSISTANT TREASURER.

A. I am responsible for financing the operations of Duke Energy and its subsidiary utilities. This includes the issuance of new debt and equity securities and obtaining other sources of external funds. My responsibilities also include financial risk management for Duke Energy and its subsidiaries. Additionally, I maintain relationships with Duke Energy's commercial banks, the fixed income investor community, and the credit rating agencies.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA ("COMMISSION") OR OTHER STATE PUBLIC UTILITY COMMISSIONS?

A. Yes. I have testified before the Commission on behalf of Piedmont Natural Gas ("Piedmont"). Most recently, I testified in Piedmont's last base rate case proceeding in Docket No. 2022-89-G.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony will address DEC's financial objectives, capital structure, and cost of capital. I will also discuss the current credit ratings and forecasted capital needs of DEC. Throughout my testimony, I will emphasize the importance of DEC's continued ability to meet the financial objectives underlying its provision of cost-effective, safe, and reliable service to its customers.

Q. PLEASE PROVIDE AN OVERVIEW OF YOUR TESTIMONY.

A. As detailed in my testimony, DEC faces substantial capital needs over the next several years as it continues the energy transition. The Company competes for capital in the open market and must appeal to debt and equity investors to attract the capital it needs. As Dr. Roger Morin, a leading expert on utility finance, states, "[t]he … prices of debt capital and equity capital are set by supply and demand, and both are influenced by the relationship between the risk and return expected for those securities and the risks expected from the overall menu of available securities." Morin, Roger A., *Modern Regulatory Finance* (PUR Books LLC 2021), at 27. Investors have a variety of investment opportunities available to them and require a return commensurate with the risk they incur. They will invest elsewhere if they feel the expected return provided by a company is inadequate, and lower credit quality weakens a company's attractiveness as an investment opportunity relative to companies with higher credit quality and similar return profiles. For this reason, it is critically important that the Company maintain strong, investment-grade credit quality to assure its financial strength and flexibility and ensure access to capital on reasonable terms in all market conditions.

As explained in Witness Michael Callahan's testimony, to continue to provide safe, reliable, resilient, and reasonably-priced electric service to its customers well into the future, the Company is making significant capital investments in the midst of a changing energy landscape, including increased load due to strong economic growth in the Southeast, population growth and transportation electrification, new state and federal policy, technology advancements and consumer trends, fuel supply challenges, an aging coal fleet, as well as inflation and supply chain challenges. To achieve this, the Company must continue to invest in improving our grid; pursue the energy transition our customers expect; invest in ways to make the energy we produce more diverse, more reliable, and even more efficient for the benefit of our customers; and investing in new technologies to enhance the customer experience. Accordingly, the Company's proposed rate increase will allow it to recover prudently incurred costs, compete in the capital markets for needed capital, and preserve its financial standing with both equity and debt investors as well as the credit rating agencies, to the long-term benefit of customers.

Q. WHAT ARE DEC'S FINANCIAL OBJECTIVES?

A. Financial strength and access to capital are necessary for DEC to provide cost-effective, safe, and reliable service to its customers. The Company always seeks to maintain its financial strength and flexibility, including its strong investment-grade credit ratings, ensuring reliable access to capital on reasonable terms. Specific objectives that support financial strength and flexibility include: (a) attaining at least 53% common equity for DEC on a financial capitalization basis; (b) ensuring timely recovery of prudently incurred costs; (c) maintaining sufficient cash flows to meet obligations; and (d) attaining a sufficient return on equity to fairly compensate shareholders for their invested capital. The ability to attract capital (both debt and equity) on reasonable terms is vitally important to the Company and its customers, and each of these specific objectives helps the Company both to maintain its investment-grade credit ratings and to meet its overall financial objectives.

Q. DO DEC'S CUSTOMERS BENEFIT FROM THE COMPANY'S STRONG CREDIT RATINGS?

A. Yes. To ensure reliable and cost-effective service, and to fulfill its obligations to serve customers, the Company must continuously plan and execute major capital projects. This is the nature of regulated, capital-intensive industries like electric and gas utilities. The Company must be able to operate and maintain its business without interruption and refinance maturing debt on time, regardless of financial market conditions. The financial markets can experience periods of volatility, and DEC must be able to finance its needs throughout such periods. Strong investment-grade credit ratings provide DEC with greater access to the capital markets on reasonable terms, especially during such periods of volatility.

Q. WHAT CAPITALIZATION AND RETURN ON EQUITY DOES THE COMPANY SEEK AND HOW WILL THE COMPANY'S FINANCIAL OBJECTIVES BE IMPACTED?

A. The proposed capitalization in the Company's revenue request is comprised of 47% debt and 53% equity. The revenue request reflects, in part, an increase in the Company's cost of equity capital from the level approved by the Commission in the Company's last general rate case. The testimony of the Company's Return on Equity ("ROE") Witness, James Coyne, explains that the Company's cost of equity capital is 10.5%, based upon his quantitative and qualitative analyses.

Approval of the Company's request in this case will support its financial objectives by allowing timely recovery of its investments in plant and equipment; providing sufficient cash flows to fund necessary capital expenditures and service debt; and providing a fair and reasonable return to equity investors, which allows the Company to provide safe, reliable service for our customers through favorable financing terms that result in lower costs for customers. This is especially critical given the Company's need for additional capacity and energy to meet load growth across the Company's system, while we retire, repurpose, and replace aging generating assets.

Q. PLEASE EXPLAIN CREDIT QUALITY AND CREDIT RATINGS, AND HOW THEY ARE DETERMINED.

A. Credit quality (or creditworthiness) is a term used to describe a company's overall financial health and its willingness and ability to repay all financial obligations in full and on time. An assessment of DEC's creditworthiness is performed by two major credit rating agencies, Standard & Poor's ("S&P") and Moody's Investors Service ("Moody's"), which results in DEC's credit rating.

Many qualitative and quantitative factors go into this assessment. Qualitative aspects may include DEC's regulatory climate, its track record for delivering on its commitments, the strength of its management team, its operating performance, and the economic vitality and customer profile of its service area. Quantitative measures are primarily based on operating cash flow and focus on the level at which DEC maintains debt leverage in relation to its generation of cash and its ability to meet its fixed obligations (interest expense in particular) based on internally generated cash. The percentage of debt to total capital is another example of a quantitative measure. Creditors and credit rating agencies view both qualitative and quantitative factors in the aggregate when assessing the credit quality of a company.

Q. WHAT IS THE ROLE OF REGULATION IN THE DETERMINATION OF THE FINANCIAL STRENGTH OF A UTILITY COMPANY?

A. Investors, investment analysts, and credit rating agencies regard constructive regulation as one of the most important factors in assessing a utility company's financial strength. These stakeholders want to be confident that the Company operates in a stable and supportive regulatory environment that will allow the Company to recover prudently incurred costs and earn a reasonable return on investments necessary to meet the demand, reliability, service, and environmental requirements of its customers and service area. Important considerations include the allowed rate of return, adequate operating cash flows, the timely recovery of capital investments, the stability of earnings, and the strength of its capital structure. Positive consideration is also given for utilities operating in states where the regulatory process is streamlined, the time lag in capital investment recovery is minimized through cost recovery mechanisms such as riders and trackers, and outcomes are equitably balanced between customers and investors.

Q. HOW ARE DEC'S OUTSTANDING SECURITIES CURRENTLY RATED BY THE CREDIT RATING AGENCIES?

A. As of the date of this testimony, DEC's outstanding debt is rated as follows:

Rating Agency	S&P	Moody’s
Issuer / Corporate Credit Rating	BBB+	A2
Senior Secured	A	Aa3
Outlook	Stable	Stable

Obligations carrying a credit rating in the “A” category are considered strong, investment-grade securities subject to low credit risk for the investor. “A” rated debt is presumed to be susceptible to changes in circumstances and economic conditions; however, the debt issuer’s capacity to meet its financial commitments is considered strong. By contrast, ratings in the “BBB” category are considered adequate and have less assurance of access to the capital markets in challenging market conditions. (AA and Aa category ratings for S&P and Moody’s, respectively, are stronger than A ratings.)

S&P may also modify its ratings with the use of a plus or minus sign to further indicate the relative standing within a major rating category. An “A+” credit rating is at the higher end of the “A” credit rating category and an “A-” is at the lower end of the category. Moody’s credit rating assignments use the numbers “1”, “2” and “3”, with the numbers “1” and “3” analogous to a “+” and “-”, respectively. For example, Moody’s credit ratings of “A2” and “A3” would be analogous to “A” and “A-” credit ratings at S&P, respectively.

The ratings outlook assesses the potential direction of a long-term credit rating over an intermediate term (typically six months to two years). DEC’s “Stable” outlook at S&P and Moody’s means that those credit ratings are not likely to change at this time; however, a change in outlook or rating could occur if the Company experiences a change in its qualitative or quantitative credit quality. S&P utilizes a family rating methodology, whereby the credit rating and outlook of the parent company, Duke Energy, is applied to each of the parent's subsidiaries.

Q. WHAT STRENGTHS AND WEAKNESSES HAVE THE CREDIT RATING AGENCIES IDENTIFIED WITH RESPECT TO DEC?

A. The rating agencies believe DEC operates in a generally constructive regulatory environment that supports long-term credit quality and view the Company's position within the Duke Energy corporate family as credit supportive. However, the rating agencies have identified several challenges the Company faces in maintaining its credit ratings. In May 2023, Moody's highlighted the fact that DEC's Cash from Operations pre-Working Capital to Debt ("Funds From Operations to Debt" or "FFO to Debt") have declined materially from the mid-to-high 20% range to the low 20% range, and also identified several factors that could adversely impact the Company's financial metrics (specifically, cash flow coverage ratios), which, in turn, could affect its ratings.[1]

- Regulatory Lag: Moody's is particularly focused on downward pressure on financial metrics due to regulatory lag, including the recovery of coal ash basin closure costs. I discuss this further, later in my testimony.
- Capital Expenditures: Moody's notes elevated capital expenditures for electric distribution, new generation, modernization of the electric grid and satisfying environmental compliance requirements, including coal ash basin closure and environmental compliance, will maintain pressure on credit metrics.

[1] *See* Moody's Investors Service, Credit Opinion, "Duke Energy Carolinas, LLC – Update to Credit Analysis," May 11, 2023 ("May 2023 DEC Report").

- Environmental Considerations: DEC has a higher energy transition risk profile, because of its current generation portfolio, than that of transmission and distribution only companies. The Company is also exposed to physical climate risks due to the location of its service territory and the propensity for severe storms.

Q. WHAT IS THE CURRENT RATINGS OUTLOOK FOR U.S. REGULATED UTILITIES?

A. In its May 18, 2023 report, S&P revised their outlook for North American Regulated Utilities to stable from negative. S&P states that "our reassessment of the sector follows three years in which downgrades significantly outpaced upgrades" and "we expect future downgrades and upgrades will be more balanced over the next two years." However, S&P also notes that "[s]ignificant risks for the industry remain, including inflation, record levels of capital spending, and the practice of many companies to operate with minimal financial cushion from their downgrade thresholds." [2]

Moody's also revised its sector outlook from negative to stable in its September 7, 2023 Outlook report. Moody's stable outlook is due, in part, to a more supportive U.S. regulatory environment than anticipated for utilities and lower financial and cost recovery risks due to abating natural gas prices and inflation. Like S&P, Moody's notes that many risks remain for the industry, including higher interest rates and elevated capital spending to reduce carbon emissions and improve system reliability and resilience. Lastly, Moody's states

[2] *See* S&P Global Ratings, Research, "The Outlook For North American Regulated Utilities Turns Stable," May 18, 2023 ("May 2023 S&P Report").

"[w]e would consider changing our outlook to negative if there is a sustained decline in regulatory support for timely cost recovery, capital markets access becomes less certain or the availability of bank credit facilities becomes constrained, or if sector FFO-to-debt dips materially below 14% in 2024 and beyond." [3]

Q. YOU HAVE CITED THE RATING AGENCIES' CONCERNS FOR THE SECTOR. HAS MOODY'S CHANGED ANYTHING SPECIFIC TO HOW THEY VIEW DEC'S CREDIT PROFILE GOING FORWARD?

A. Yes. While affirming the Company's stable outlook in its April 24, 2023 publication, Moody's also acted by raising the downgrade threshold for DEC's FFO-to-Debt metric by 100 basis points from 20% to 21%.[4] In the past, Moody's would have reviewed DEC's credit profile for a potential downgrade if the Company's FFO/Debt metric fell below 20% on a sustained basis. However, going forward, Moody's will now measure DEC's creditworthiness against a higher downgrade threshold of 21%. This change represents a tightening of credit, or a stricter threshold for DEC to maintain its current long-term senior unsecured rating of A2. Moody's reiterated the raised downgrade threshold in its most recent DEC credit opinion.[5]

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[3] *See* Moody's Investor Service, Outlook, "Outlook turns stable on low natural gas prices and credit-supportive regulation," September 7, 2023 ("September 2023 Moody's Report").

[4] *See* Moody's Investors Service, "Rating Action: Moody's affirms Duke Energy and subsidiary ratings; changes outlook of Duke Energy Kentucky to negative," April 24, 2023.

[5] *See* May 2023 Moody's Report.

Q. WHAT IS DEC'S PROPOSED CAPITAL STRUCTURE?

A. As mentioned earlier in this testimony, DEC's proposed capital structure is 47% long-term debt and 53% equity. The Company believes this proposed capital structure is optimal for DEC, as it introduces an appropriate amount of risk due to leverage while minimizing the weighted average cost of capital to customers. Approval of the proposed capital structure will help DEC maintain its credit quality. This level is also consistent with the Company's target credit ratings for DEC.

Q. DOES THE ACTUAL FINANCIAL CAPITAL STRUCTURE VARY OVER TIME?

A. Yes. It does. The specific debt/equity ratio will vary over time, depending on a variety of factors, including, among other things, the timing and size of capital investments and payments of large invoices, debt issuances, seasonality of earnings, and dividend payments to the parent company. Achieving an approved regulatory capital structure of 47/53 is consistent with the Company's financial objectives and overall plan to maintain its ability to finance operations at rates favorable for customers and DEC will manage its capital structure within a reasonable range of this base. As of December 31, 2022, DEC's capital structure was 45.9% long-term debt and 54.1% equity.

Q. WHAT IS DEC'S COST OF EQUITY?

A. In his Direct Testimony, Witness Coyne, indicates that the Company's cost of equity is 10.5%, and the Company supports Witness Coyne's analysis.

Q. WHAT ROLE DO EQUITY INVESTORS PLAY IN THE FINANCING OF DEC, AND HOW WILL THE OUTCOME OF THIS CASE IMPACT THESE INVESTORS?

A. Equity investors provide the foundation of a company's capitalization by providing significant amounts of capital, for which a reasonable economic return is required. DEC compensates equity investors for the risk of their investment in Duke Energy by targeting fair and adequate returns, a stable dividend, and earnings growth – these are all necessary to preserve access to equity capital. Returns to equity investors are realized only after all operating expenses and fixed payment obligations (including debt principal and interest) of the business have been paid. Because equity investors are the last to receive surplus earnings and cash flows, their investment involves significantly more risk. For this reason, equity investors require a higher return for their investment. Equity investors expect utilities like DEC to recover their prudently incurred costs and earn a fair and reasonable return for their investors. The Company's proposal in this proceeding supports this investor requirement.

Q. WHAT EFFECT DOES CAPITAL STRUCTURE AND RETURN ON EQUITY HAVE ON CREDIT QUALITY?

A. Capital structure and return on equity are important components of credit quality. As mentioned in the previous answer, the greater the equity component of capitalization, the safer the returns are to debt investors, which translates into higher credit quality and lower borrowing costs. In addition, the allowed return on equity is a key component in the generation of earnings and cash flows. An adequate return on equity helps ensure equity investors receive fair compensation for their investment while also helping to protect the interests of debt investors.

A strong capital structure and an adequate return on equity provide balance sheet protection and cash flow generation to support high credit quality. High credit quality creates financial flexibility by providing more readily available access to the capital markets on reasonable terms, and ultimately lower debt financing costs. Conversely, a weak capital structure and an inadequate allowed return on equity produces lower earnings and cash flows, lowers credit quality, and may limit financial flexibility. For example, the coal ash settlement in North Carolina, including lower authorized returns and the inability to fully recover prudently incurred costs, were highlighted in S&P's Rating Action Rationale supporting their downgrade for Duke Energy Corporation and its subsidiaries in January 2021.[6]

Q. DO YOU BELIEVE THAT DEC'S CAPITAL STRUCTURE HAS AN ADEQUATE EQUITY COMPONENT TO ENABLE DEC TO ACHIEVE THE COMPANY'S FINANCIAL STRENGTH AND CREDIT QUALITY OBJECTIVES?

A. Yes. DEC's equity component, as requested in this case, enables it to maintain current credit ratings and financial strength and flexibility. This level of equity enables the Company to tolerate different business cycles while also providing

[6] *See* S&P Global Ratings, Research Update "Duke Energy Corp. And Subsidiaries Downgraded To 'BBB+' On Coal Ash settlement, Outlook Stable," January 26, 2021 ("January 2021 Duke Energy Corporation Report").

more confidence to the Company's lenders and bondholders. Like many utilities, DEC is in a period of significant capital investment necessary to provide cost-effective, safe, resilient and reliable service to its customers in a time of rising costs, lower load growth, and rapidly evolving state and federal requirements. The magnitude of its capital requirements dictates the need for a strong equity component of the Company's capital structure to ensure access to capital funding at reasonable terms.

Q. WHAT IS DEC'S AVERAGE COST OF LONG-TERM DEBT?

A. DEC's weighted average cost of long-term debt as of the end of the test year (December 31, 2022) was 4.40%. The 4.56% cost of long-term debt used to compute the Company's requested weighted average cost of capital of 7.71% was updated as of September 30, 2023. The Company will update the average cost of long-term debt throughout the proceeding.

Q. HOW DOES DEC'S CURRENT COST OF CAPITAL COMPARE TO THE COST OF CAPITAL APPROVED BY THE COMMISSION IN DEC'S 2018 RATE CASE IN DOCKET NO. 2018-319-E?

A. DEC's requested 7.71% average cost of capital is just 55 basis points above the 7.16% rate of return approved by this Commission in the Company's 2018 rate proceeding and is a testament to the Company's prudent long-term capital funding strategy. Supporting this manageable cost of capital increase is the fact that DEC'S 4.56% cost of long-term debt as of September 30, 2023, is only 3 basis points higher than the 4.53% cost of long-term debt as of December 31, 2018, and currently approved in rates. Following the onset of the COVID-19 pandemic in early 2020, the Federal Reserve ("Fed") implemented a zero-interest rate policy, which lasted until the Fed began aggressively hiking interest rates in March 2022 to combat rising inflationary pressures. During this two-year period of zero-interest rate policy, long-term U.S. Treasury ("UST") yields also declined to historically low levels with the 10-year UST rate reaching as low as 0.54% and the 30-year UST rate touching just below 1.00%. During this period of ultra-low interest rates, the Company continued to fund its capital requirements by locking in historically low interest rates with the issuance of long-dated securities, instead of opting for short-dated securities offering marginally lower all-in yields. In doing so, the Company materially reduced its refinancing risk as only 7% of DEC's nearly $16 billion long-term debt portfolio will mature or over the next three years. With the Fed raising interest rates 525 basis points since March 2022 and long-term UST rates now closer to 4.50%, the Company's long-term debt funding strategy should prove very beneficial to customers in the coming years.

Q. WHAT ARE DEC'S CAPITAL REQUIREMENTS OVER THE THREE-YEAR PERIOD FOLLOWING THE TEST YEAR?

A. DEC faces substantial capital needs over the next several years to refurbish, replace, and upgrade aging infrastructure; construct or acquire needed generation resources; strengthen and modernize our energy grid; comply with regulatory requirements; and satisfy its debt maturities. The Company's total capital requirements for the three-year period following the test year (2023-2025) are projected to be approximately $12.2 billion. This amount consists of approximately $11.1 billion in projected capital expenditures and approximately $1.1 billion in debt retirements.

Q. DO YOU SUPPORT THE COMPANY'S ACCOUNTING REQUEST TO CONTINUE DEFERRING COAL ASH BASIN CLOSURE COSTS RATHER THAN IMPLEMENT A CONTEMPORANEOUS RECOVERY MECHANISM?

A. Yes. It is in the best interest of both customers and the Company to continue the accounting deferral treatment of coal ash basin closure costs (the spend/defer/recover model). As detailed in Witness LaWanda Jiggetts' testimony, the Company is requesting authorization to continue deferring costs related to compliance with coal ash regulations beyond the December 31, 2023 cut-off in this case. Implementing a contemporaneous recovery mechanism would have a negative impact on the Company's FFO/Debt credit metric while also increasing customer bills. Adding a contemporaneous recovery mechanism to future coal ash spend would unnecessarily increase customer bills while the Company recovers its historical coal ash spend approved in prior rate cases and requested in this proceeding. In addition, under the current recovery method in which coal ash costs are deferred and recovered with a debt and equity return, Moody's makes a favorable adjustment to the Company's FFO calculation by adding back coal ash expenditures to the Company's operating cash flows. Moving to a contemporaneous recovery mechanism would jeopardize this treatment of coal ash expenditures by Moody's and harm the Company's credit metrics, thereby potentially increasing the cost of capital in the future to the detriment of customers.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.